EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 62188325 PUBLICATION DATE : 17-08-87

APPLICATION DATE : 14-02-86 APPLICATION NUMBER : 61030278

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INT.CL. : H01L 21/304 B24B 49/12 C30B 33/00

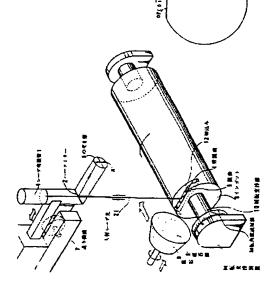
G01B 11/26 G01N 21/00 G01N 21/55

TITLE: METHOD AND APPARATUS FOR

FORMING ORIENTATION FLAT

SURFACE OF COMPOUND

SEMICONDUCTOR



ABSTRACT:

PURPOSE: To enable the direct formation of an orientation flat on a cylindrical ingot without cutting off wafers by a method wherein an appropriate specular surface on a cracking plane formed in a part of the cylindrical ingot is detected by a laser detector provided movably, a laser beam is applied to the face for positioning, and thereafter the orientation flat is formed by grinding.

CONSTITUTION: A cut 12 is formed in the end portion of an ingot in the direction perpendicular to the axis, a thin piece is cleaved off, and a cleavage plane 4 is exposed. The cleavage plane 4 is directed toward a laser oscillator tube 1, and a feeding mechanism 7 is adjusted with a peep through a peeping window 3, so that a laser beam strikes upon a specular surface portion. The ingot is rotated in the state wherein the specular surface 5 is exposed to the laser beam, so that the spot of a reflected beam is coincident with the center M of the peeping window 3. A grinder 8 positioned in parallel with the incident laser beam is pushed against the lateral surface of the ingot and moved along a bus line while rotated, so that a cleavage plane parallel with the surface 9 of the grinder is ground. After one orientation flat OF is formed by grinding in this way, the grinding of another orientation flat IF is conducted.

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